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1 Routine/Function Prologues

1.0.1 subroutine interp_agrmet_lw.F90 (Source File: interp_agrmet_lw.F90)

Opens, reads, and interpolates AGRMET longwave radiation
 GRIB IPOLATES UTILITY TO INTERPOLATE DATA FOR NH AND SH IN RT-
 NEPH (512X512) POLAR STEREOGRAPHIC GRIDS TO MERGED GLOBAL DATA
 IN GLDAS-SPECIFIED LAT/LON GRIDS;

REVISION HISTORY:

26 Jun 2001: Urszula Jambor; Initial code, based on Jesse Meng's
 RTNEPH2LATLON.F code.
 08 Feb 2002: Urszula Jambor; Modified declarations of arrays
 dependant on domain & resolution to allocatable.
 Pass in values for latmax.
 11 Dec 2002: Urszula Jambor; Added 1/2 & 1 degree resolution GDS arrays
 04 May 2004: James Geiger; Added.opendap support through lis_indices_module

INTERFACE:

```
subroutine interp_agrmet_lw( pdata1, outdata, ferror )
```

USES:

```
use lisdrv_module, only : lis, gindex
use agrmetdomain_module, only : rlat, rlon, w11, w12, w21, w22, n11, n12, n21, n22, mi, mo
use lis_indices_module
implicit none
```

```
integer, parameter :: nagrc=1440, nagrr=600
```

ARGUMENTS:

```
real :: pdata1(nagrc, nagrr)
real :: outdata(lis%d%ngrid) !output array matching grid(c,r)
integer :: ferror !set to zero if error found
```

CONTENTS:

```
!-----
! READ INPUT DATA
!-----
allocate(pdata(mi))
allocate(lo1(lis_nc_working*lis_nr_working))
allocate(ldata1(lis_nc_working*lis_nr_working))
if (ferror == 0) then
  do i=1, lis%d%ngrid
    outdata(i) = lis%d%undef
  end do
else
  ferror = 1
```

```
    ibi = 1
    count = 0
    li1 = .false.
    do j=1,nagrr
      do i=1,nagrc
        pdata(count+i) = pdata1(i,j)
      enddo
      count = count+nagrc
    enddo
    do i=1,mi
      if(pdata(i).eq.-9999) then
        li1(i) = .false.
      else
        li1(i) = .true.
      endif
    enddo
    kgdso = 0
    kgdso = lis%d%kgds
    call polates0(kgdso,ibi,li1,pdata,ibo,lo1,ldata1,mi,mo,&
      rlat,r lon,w11,w12,w21,w22,n11,n12,n21,n22,iret)

    if(iret .NE. 0) then
      print*, "IPOLATES ERROR!! PROGRAM STOP!!"
      call exit(iret)
    end if

!-----
! COMBINE LDATA1 AND LDATA2 INTO LDATA
!-----

    count = 0
    do j=1,lis_nr_working
      do i=1,lis_nc_working
        if(gindex(i,j).ne. -1) then
          outdata(gindex(i,j)) = ldata1(i+count)
        endif
      enddo
      count = count+lis_nc_working
    enddo
  endif
  deallocate(pdata)
  deallocate(lo1)
  deallocate(ldata1)
```